



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/723,389

11/25/2003

Thomas Redden Veariel

2003B103/2

8869

23455 7590 10/15/2008
EXXONMOBIL CHEMICAL COMPANY
5200 BAYWAY DRIVE
P.O. BOX 2149
BAYTOWN, TX 77522-2149

EXAMINER

BODAWALA, DIMPLE N

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/723,389	Applicant(s) VEARIEL ET AL.	
	Examiner DIMPLE N. BODAWALA	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-39, 41-46, 49-61, 63, 64, 72-74, 76-78, 80, 81, 83-85 and 87-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 36-39, 41-46, 49-61, 63, 64, 72-74, 76-78, 80, 81, 83-85 and 87-90 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- Claims 36-39, 41-46, 49-61, 63, 64, 72-74, 76-78, 80, 81, 83-85 and 87-90 are pending.
- Claims 1-35, 40, 47, 48, 62, 65-71, 75, 79, 82 and 86 are cancelled.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/26/2008 and 9/25/2008 has been entered.

Response to Arguments

2. Applicant's arguments, see Remarks, filed on 8/26/2008, with respect to the rejection(s) of claim(s) have been fully considered but not found persuasive. Applicant argues the meaning of the word "proximate". One of applicant's definitions is "near" the die exit opening (see paragraph 0032 of specification). It is thus clear that the applied prior art teaches heating at least "near" the die opening, satisfying the word "proximate".

3. Applicant argues that the prior art, Leffew et al. (US 6,409,491) discloses a heater (2) is not located at the die opening (12). There is a thermocouple 3 located at the outlet that would prevent the placement of the heater 2 at the die opening. Further, there is air gap (8) would make the placement of the heater at the die opening impossible.

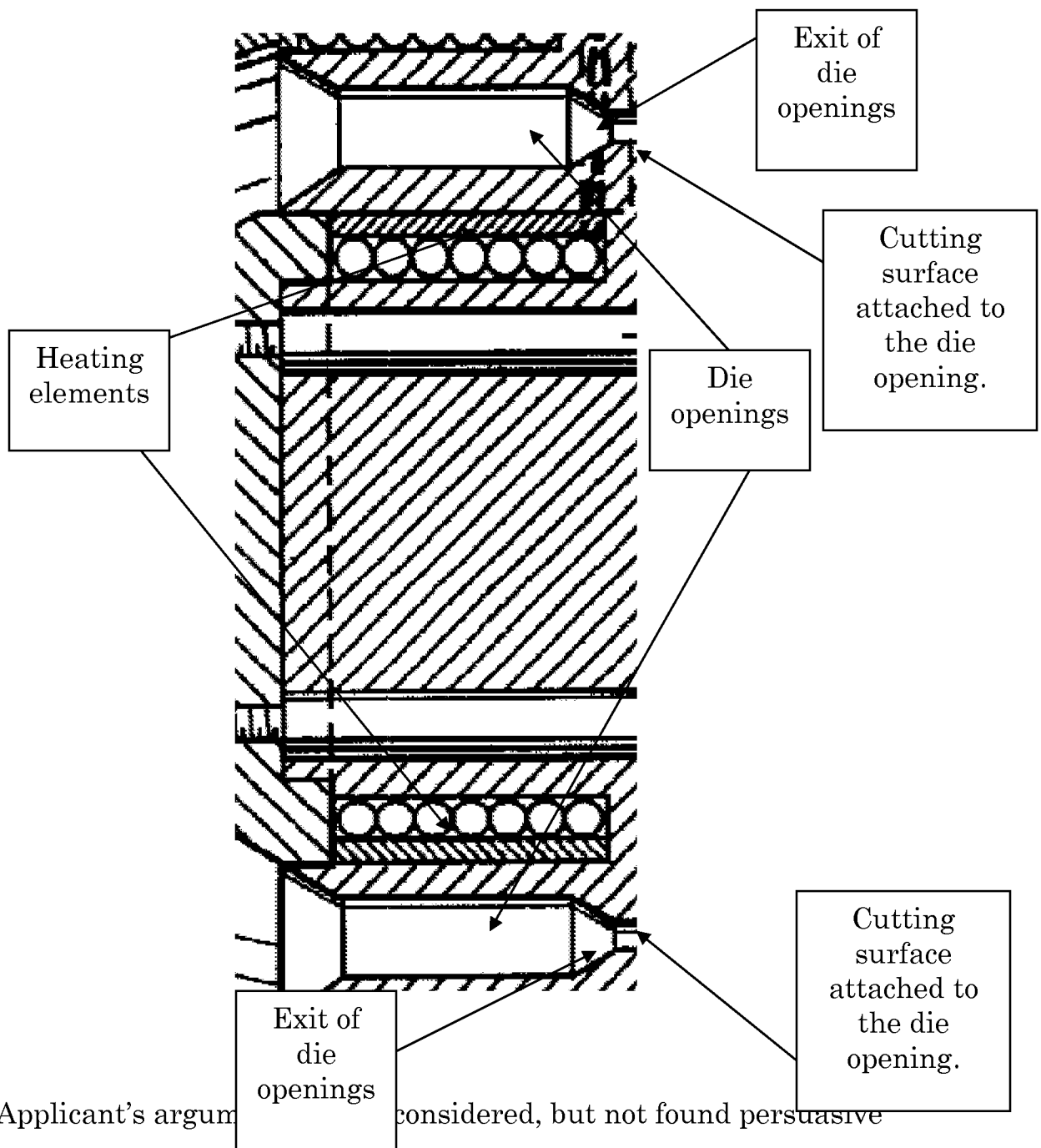
4. Applicant's argument is fully considered but not found persuasive because the prior art, Leffew et al. ('491) discloses extrusion die assembly (14) having polymer passage (15); extrusion barrel with inlet (11) and outlet(12); and a heater (2), wherein heater press fit on the outside of the barrel with thermocouple for sensing the polymer temperature at the extrusion barrel outlet (12) (See col.2 lines 60-67; figure 1), thus it teaches that the heater is disposed at the or near the die opening for heating the polymers at the exit. If prior art discloses claimed structural limitation with the desired function, therefore, mere change in location of the structural limitation does not differentiate the function of the apparatus, and has no patentability weight, see *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400. Therefore, rejection of claims in view of Leffew et al. has been maintained.

5. Applicant further argues that the prior art, Yoshida et al. (US 6,220,847) discloses a die having nozzle surrounded by the heat transfer

channels, wherein prior art uses the term “periphery” for describing the position of the heater, not the phrase “proximate”.

6. Applicant’s argument is fully considered but not found persuasive because the prior art, Yoshida et al. (‘847) discloses underwater granulating die (2) which comprises die openings(7); and a heat transfer channel (8) formed in the periphery of the die and is provided in periphery of the opening (7) (See col.4 lines 33-36), wherein the periphery of the nozzle contains an exit point of nozzle and entrance point of nozzle, and, thus, inherently suggests that heating means is located near or at the downstream opening as cited in the claims of the instant application. (“Periphery” means boundary of an area). It further teaches that the high-temperature melted resin material extruded from the extruder, wherein the high-temperature melted resin is maintained the desired range of temperature with the help of heating means (8), which is located near the external surface of the opening (See col.5 lines 1-18; col.3 lines 41-46; and col.3 lines 55-56). If prior art discloses claimed structural limitation with the desired function, therefore, mere change in location of the structural limitation does not differentiate the function of the apparatus, and has no patentability weight, see *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400. Therefore, rejection of claims in view of Yoshida et al. has been maintained.

7. Applicant further argues that the prior art, Ready et al. (US 6,474,969) discloses a die having an electric heating elements (28a, 28b) surround the orifice (22). However, figure and description of the art, it is apparent that the heating element is not distal, and, thus, the prior art fails to disclose heater proximate the downstream face and proximate with the at least one passage at the downstream opening and/or a heating means for the down stream zone.



8. Applicant's argument is considered, but not found persuasive because the prior art, Ready et al. ('969) discloses extrusion die and die assembly which comprises die plate (12) having die opening (22) and raised cutting surface (21), wherein the die opening (22) is surrounded by heating

elements (24, 26, 28a, 28b) (see figures 3-4). It further teaches that the heating element is involved to provide heat to the die opening (22) both on the inside and out side, thereby maintaining uniform amount of heat around the openings (22), which allows the molten material passing through each of the opening (22) to remain in molten condition unit it has exited from the opening (See col.4 lines 4-10). If prior art discloses claimed structural limitation with the desired function, therefore, mere change in location of the structural limitation does not differentiate the function of the apparatus, and has no patentability weight, see *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400.

9. Therefore, the rejection has been maintained in view of prior arts Leffew et al. (US 6,409,491); Yoshida et al. (US 6,220,847) and Ready et al. (US 6,474,969).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 36, 38-39, 43-46, 51-53 and 57-61 are rejected under 35**

U.S.C. 102(b) as being anticipated by Yoshida et al. (US 6,220,847).

12. As to claim 36, Yoshida et al. ('847) discloses die which comprises an upstream face; a down stream face; plurality of passages having a first opening in the upstream face whereby the molten material at bulk temperature may be received, a second opening in the downstream face whereby the molten resin may be extruded (See figures 1-2). It further discloses a plurality of heaters (1b, 8), wherein heaters (8) proximate the down stream face and proximate with the passage at the downstream face and capable of heating the molten resin (See figure 2). It further teaches that the heater is involved to keep the die surface at a high temperature of about 250 degree C (See col.1 lines 49-51), which inherently suggests that the heater is capable to locally heating the molten resin to a temperature about 250 degree C. It further suggests that the local molten resin temperatures being from 30-170 degree C above the bulk temperature (See figure 3; col.6 lines 9-16).

13. As to claim 38-39, it further teaches that the heater (8) is concentric with the passage, wherein passage passes through a portion of the heater, such that the portion defines the wall of the passage proximate the downstream face (See figures 1-2).

14. As to claims 43, 58, it further teaches that the die plate is a monolithic die plate (See figure 1).

15. As to claims 44-46, 59-61, it further teaches that the first die plate having an upstream face and a second plate having the downstream face and heater (8), wherein first and second plates fluidically connected by the passage, wherein a plurality of at least one passage and wherein the first and second plates are fluidically connected by each of the passage (See figures 1 and 3).

16. As to claim 51, it discloses a die plate having a passage including an initial, upstream zone having an opening for receiving a polymer melt having a bulk temperature T_{melt} , an intermediate zone for conveying the polymer melt, and a final, down stream zone terminating the extrusion die assembly at an exit opening whereby the polymer melt exits the die assembly (See figure 3). It further discloses a plurality of heaters (1b, 8), wherein heaters (8) proximate the down stream face and proximate with the passage at the downstream face and capable of heating the molten resin (See figure 2). It further teaches that the heater is involved to keep the die surface at a high temperature of about 250 degree C (See col.1 lines 49-51), which inherently suggests that the heater is capable to locally heating the molten resin to a temperature about 250 degree C. It further suggests that the local molten

resin temperatures being from 30-170 degree C above the bulk temperature (See figure 3; col.6 lines 9-16).

17. As to claims 52-53, it further teaches that the die assembly comprises a plurality of extrusion orifices forming a pattern, wherein the heating means (8) comprises a heater concentric with the extrusion orifice pattern, wherein heating means (8) proximate the exit opening (See figure 3).

18. As to claim 57, it further teaches that the die plate comprises a plurality of passages (See figures 1-2).

19. Yoshida et al. discloses all claimed structural limitations as discussed above, and, thus, the claims are anticipated.

20. **Claims 73, 74, 76-78, 80, 81 and 83-85 are rejected under 35 U.S.C. 102(b) as being anticipated by Ready et al. (US 6,474,969).**

21. As to claims 73, 80, Ready et al. ('969) discloses an extrusion die assembly (10) comprising a die plate (12) (See figure 3) for preparing pellets (See col.1 lines 11-15), wherein plate is made of steel (See col.3 lines 25-27) and having an extruder face as an upstream face (18); a cutting face as a downstream face (20); annular inner and outer groove (24,26) as at least one passage for receiving the material and second opening for extruding material in downstream face (20) direction (See figure 3); and an electrical heating element (28a,28b) proximate the downstream face and proximate with the

one passage (24,26) at the downstream opening (see figure 3; col.4 lines 4-10), wherein the electrical heating element which inherently capable of locally heating the molten resin with the electrical heating elements. It further teaches that the annular passage (24, 26) is filled with a thermally conductive paste so that heat from heating element (28a, 28b) may be properly conducted to orifice (22) (See col.4 lines 11-20), which inherently suggests that the insulation material concentric with the passage and contiguous with the portion of the heating element which defines the wall of the passage, wherein the passage proximate opening of the downstream face for extruding the material.

22. As to claim 74, Figure 3 further teaches that the portion of the heaters (28a, 28b) defines the wall of the passage (24, 26) proximate the downstream face.

23. As to claims 76, 78, 83 and 85, it further teaches that the die plate is monolithic die plate (See figure 4), wherein the die plate is made of steel (See col.3 lines 25-27).

24. As to claims 77, 84, it further teaches that the dies plate comprises a first plate having upstream face and a second plate having a downstream face and the heater, wherein the first and second plates fluidically connected by the passage (See figure 4).

25. As to claim 81, figure 4 further shows that the heating means is proximate to the exit opening.

26. Ready et al. discloses all claimed structural limitations as discussed above, and, thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

28. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

29. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the

time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

30. Claims 36-39, 43-46, 51-53, 56-61, 72-74, 76-77, 80-81 and 83-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leffew et al. (US 6,409,491).

31. As to claims 36-38, 51, 52, 56, Leffew et al. ('491) discloses the extrusion die assembly (14) with the die plate (4), which comprises an upstream face (11); a downstream face (12); a passage (15) having a first opening in the upstream face (11) whereby molten resin at bulk temperature may be received and a second opening in said downstream face (12) whereby molten resin may be extruded, wherein passage (15) is generally cylindrical and having substantially uniform diameter from the upstream to the downstream (See figure 1); and a heater (2) proximate said downstream face (12) and proximate with the passage (15) at the down stream opening and capable of heating the molten resin to a temperature, wherein the heater (2) is a combination of band heaters and cartridge heaters to keep the material

flowing and to avoid frictional drag on the material passing through the plate and to prevent solidification prior to cutting (See col.1 lines 21-25), which can be understandable that a combination of band heaters and cartridge heaters is a part of an electrical heating elements. It further teaches that the die plate (4) comprises the intermediate zone (9) for conveying the polymer melt (See figure 1). Figure 1 further teaches that the extrusion die assembly (14) having a plurality of extrusion orifices and the monolithic heater (2) in a resin shaping apparatus comprises a heater having first face to engage with the orifice, and second face opposite to the first face. It further teaches that the die plate is associated with the combination of a band and cartridge heater, means to provide electrical energy to the heater (See col.1 lines 21-32).

32. As to claims 39, 53, figure 1 shows that passage (15) passes through a position of the heater (2) such that the position is defines the wall of the passage proximate the downstream face. It further teaches that the heater (2) is concentric with the passage, wherein the passage (15) passes through the portion of the heater, such that the portion defines the wall of the passage proximate the down stream face (12).

33. As to claims 43, 58, 76, 83, it further teaches that the die plate (4) is monolithic die plate (See figure 1).

34. As to claims 44-46, 57, 59-61, Figure 1 further teaches that the die plate (4) comprises the first plate having the upstream face (11) and a second plate having the downstream face (12) and heater (2), and also plurality of passage, wherein said first and second plate are fluidically connected by the passage (15) (See col.2 lines 18-48).

35. As to claim 72, Figure 1 further teaches that the extrusion die assembly (14) having a plurality of extrusion orifices and the monolithic heater (2) in a resin shaping apparatus comprises a heater having first face to engage with the orifice, and second face opposite to the first face. It further teaches that the die plate is associated with the combination of a band and cartridge heater, means to provide electrical energy to the heater (See col.1 lines 21-32). It further discloses a plurality of heaters (2), wherein each heater containing a corresponding extrusion barrel within the interior, such that the corresponding extrusion barrel is heated to a predetermined temperature (See figure 1, col.4 lines 14-18), which inherently suggests that the heating means for raising a local area of the material flow to a temperature above the T_{melt} as defined in the claims of the instant application. Figure 1 further teaches that the die plate (4) comprises the first plate having the upstream face (11) and a second plate having the downstream face (12) and heater (2),

and also plurality of passage, wherein said first and second plate are fluidically connected by the passage (15) (See col.2 lines 18-48).

36. As to claims 73-74, 77, 80-81, 84 Leffew et al. ('491) discloses the extrusion die assembly (14) with the die plate (4), which comprises an upstream face (11); a downstream face (12); a passage (15) having a first opening in the upstream face (11) whereby molten resin at bulk temperature may be received and a second opening in said downstream face (12) whereby molten resin may be extruded, wherein passage (15) is generally cylindrical and having substantially uniform diameter from the upstream to the downstream (See figure 1); and a heater (2) proximate said downstream face (12) and proximate with the passage (15) at the down stream opening and capable of heating the molten resin to a temperature, wherein the heater (2) is a combination of band heaters and cartridge heaters to keep the material flowing and to avoid frictional drag on the material passing through the plate and to prevent solidification prior to cutting (See col.1 lines 21-25), which can be understandable that a combination of band heaters and cartridge heaters is a part of an electrical heating elements. It further teaches that the die plate (4) comprises the intermediate zone (9) for conveying the polymer melt (See figure 1). Figure 1 further teaches that the extrusion die assembly (14) having a plurality of extrusion orifices and the monolithic heater (2) in a

resin shaping apparatus comprises a heater having first face to engage with the orifice, and second face opposite to the first face. It further teaches that the die plate is associated with the combination of a band and cartridge heater, means to provide electrical energy to the heater (See col.1 lines 21-32). Figure 1 further teaches that the die plate (4) comprises the first plate having the upstream face (11) and a second plate having the downstream face (12) and heater (2), and also plurality of passage, wherein said first and second plate are fluidically connected by the passage (15) (See col.2 lines 18-48).

37. Leffew ('491) discloses all claimed structural limitations as discussed above. He further teaches that the heater is capable of heating the polymer at a predetermined temperature, however does not provide the temperature range at which the heater is capable of being operated.

38. If the prior art discloses heater, wherein heater is involved to heat the resin to a predetermined temperature, therefore the prior art is capable to position the heater at a predetermined location to get desired result of the resin. Eventhough, the position of the heater is not similar to the position of heater of the instant application, but the function of element is similar, therefore, there is no patentability weight for location of heater. It has been recognized that to shift location of parts when the operation of the device is

not otherwise changed is within the level of ordinary skill in the art, *In re Japikse*, 86 USPQ 70; *In re Gazda*, 104 USPQ 400; *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). The prior art is capable to provide motivation or reason for the heater such as to heat a resin to a predetermined temperature which can be 30-170 degree C above Tmelt. Furthermore, the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation, *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

39. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Leffew ('491) by providing the heater capable of heating to the temperature range as recited in the claims I order to provide the desired heating at a wide range of temperature for melting a variety of polymers inherently having a wide range of melt temperatures.

40. **Claims 41-42, 49-50, 54-55, 63-64, 78, 85 and 87-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leffew et al. (US 6,409,491) in view of Dudley (US 4,123,207).**

41. Leffew et al. discloses all claimed structural limitations as discussed above, but does not disclose the die plate made of material, the insulation material, and also the deposition of insulation material.

42. In the analogous art, Dudley ('207) discloses the die plate, which is made from Inconel, stainless steel, or like material (See col.3 lines 60-68). It further teaches that either low thermal conductivity material or Teflon insulates the die plate (See col.4 lines 20-27), as we know that Teflon having melting point is 327 degree C or 620.6 degree F (See wikipedia cite), which inherently suggests that TEFLON consists the higher temperature property. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claims following the preamble is a self-contained description of the structure (such as high temperature property of the insulation material) not depending for completeness upon the introductory clause, *Kropa v. Robie*, 88 USPQ 478. Moreover, when the preamble states a purpose or intended use for the invention, it is not limiting: it merely indicates the environment in which the claimed invention operates, *Loctite Corp. V. Ultraseal Ltd.*, 228 USPQ 90, 94.

43. Claims 49-50, 63-64 and 89 are recited the limitations of the process steps for depositing the insulation material either spray coating techniques or vapor deposition techniques. With regard to the claim recitations regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of the patentability

is based on the product apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of the product does not depend on its method of the production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thrope*, 227 USPQ 964 (CAFC 1985).

44. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Leffew ('491) by providing the material of the die plate because such an alignment having a high thermal conductivity which can be helpful to utilize the steam to maintain the material being extruded in a molten state (See col.1 lines 54-61) as suggested by Dudley ('207).

45. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Leffew ('491) by providing an insulation material of Dudley ('207) because such an alignment is involved to prevent freeze off of the die plate during the extrusion process.

46. **Claims 41, 42, 49, 50, 54, 55, 63, 64, 87 and 88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (US 6,220,847) in view of Dudley (US 4,123,207).**

47. Yoshida et al. discloses all claimed structural limitations as discussed above, but does not disclose the die plate made of material, the insulation material, and also the deposition of insulation material.

48. In the analogous art, Dudley ('207) discloses the die plate, which is made from Inconel, stainless steel, or like material (See col.3 lines 60-68). It further teaches that either low thermal conductivity material or Teflon insulates the die plate (See col.4 lines 20-27), as we know that Teflon having melting point is 327 degree C or 620.6 degree F (See wikipedia cite), which inherently suggests that TEFLON consists the higher temperature property. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claims following the preamble is a self-contained description of the structure (such as high temperature property of the insulation material) not depending for completeness upon the introductory clause, *Kropa v. Robie*, 88 USPQ 478. Moreover, when the preamble states a purpose or intended use for the invention, it is not limiting: it merely indicates the environment in which the claimed invention operates, *Loctite Corp. V. Ultraseal Ltd.*, 228 USPQ 90, 94.

49. Claims 49-50 and 63-64 are recited the limitations of the process steps for depositing the insulation material either spray coating techniques or vapor deposition techniques. With regard to the claim recitations regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of the patentability is based on the

product apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of the product does not depend on its method of the production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thrope*, 227 USPQ 964 (CAFC 1985).

50. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Yoshida et al. by providing the material of the die plate because such an alignment having a high thermal conductivity which can be helpful to utilize the steam to maintain the material being extruded in a molten state (See col.1 lines 54-61) as suggested by Dudley ('207).

51. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Yoshida et al. by providing an insulation material of Dudley ('207) because such an alignment is involved to prevent freeze off of the die plate during the extrusion process.

52. **Claims 89 and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ready et al. (US 6,474,969) in view of Dudley (US 4,123,207).**

53. Ready et al. discloses all claimed structural limitations as discussed above, but does not disclose the insulation material, and also the deposition of insulation material.

54. In the analogous art, Dudley ('207) discloses the die plate, which is made from Inconel, stainless steel, or like material (See col.3 lines 60-68). It further teaches that either low thermal conductivity material or Teflon insulates the die plate (See col.4 lines 20-27), as we know that Teflon having melting point is 327 degree C or 620.6 degree F (See wikipedia cite), which inherently suggests that TEFLON consists the higher temperature property. It has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claims following the preamble is a self-contained description of the structure (such as high temperature property of the insulation material) not depending for completeness upon the introductory clause, *Kropa v. Robie*, 88 USPQ 478. Moreover, when the preamble states a purpose or intended use for the invention, it is not limiting: it merely indicates the environment in which the claimed invention operates, *Loctite Corp. V. Ultraseal Ltd.*, 228 USPQ 90, 94.

55. Claim 89 recites the limitations of the process steps for depositing the insulation material either spray coating techniques or vapor deposition techniques. With regard to the claim recitations regarding the method of forming the apparatus, such relate only to the method of producing the claimed apparatus, which does not impart patentability to the apparatus claims. The determination of the patentability is based on the product

apparatus itself, *In re Brown*, 173 USPQ 685, 688, and the patentability of the product does not depend on its method of the production, *In re Pilkington*, 162 USPQ 145, 147; *In re Thrope*, 227 USPQ 964 (CAFC 1985).

56. It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Ready et al. by providing an insulation material of Dudley ('207) because such an alignment is involved to prevent freeze off of the die plate during the extrusion process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIMPLE N. BODAWALA whose telephone number is (571)272-6455. The examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PHILLIP C. TUCKER can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dimple N Bodawala
Examiner
Art Unit 1791

/D. N. B./
Examiner, Art Unit 1791

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791